



Network Camera

VB-H630VE/VB-H630D/VB-M620VE/VB-M620D

Installation Guide

Thank you for purchasing a Canon Network Camera (hereafter referred to as the camera).
VB-H630D/VB-M620D is designed for indoor use only. It is also possible to install the VB-H630VE/
VB-M620VE outdoors, such as underneath eaves.

Be sure to read "Installation Guide" (this document) and "Operation Guide" (included in the Setup CD-ROM) before use.

This "Installation Guide" explains the installation method for installing the camera on a ceiling or wall and the installation method using the separately sold junction box mounting kit PS600-VB. Be sure to read the "Safety Precautions" section for correct use. After reading this Installation Guide, keep it in a readily accessible location for future reference.

For the installation of this camera recessed into a ceiling or wall using the recessed mounting kit (sold separately), please read the "Recessed Mounting Kit SR600-VB Installation Guide" included with the recessed mounting kit.

When using the heater unit (sold separately), please read the "Heater Unit HU600-VB User Manual" included with the heater unit.

The detailed procedures for using this camera are explained in the "Operation Guide". Read these guides carefully before using the camera to ensure correct use.

* For the latest information (firmware and included software, user manuals, operating environment, etc.), please refer to the Canon Web Site.

* Some cameras are not sold in some countries or regions.

WARNING **H630D** To reduce a risk of fire or electric shock, do not expose this **M620D** product to rain or moisture.

Caution Request a professional installer for all camera installation work. Never try to install the camera yourself. Doing so may result in unforeseen accidents such as dropping the camera or electric shock.

Write the serial number and MAC address of the camera (printed on the seal at the bottom of the camera) in the field below before storing this Installation Guide in a safe location.

Serial number _____
MAC Address _____

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Check Included Items

This product comes with the following items. If any item is missing, contact the dealer where you purchased the product.

1. Camera
(VB-H630VE/VB-H630D/
VB-M620VE/VB-M620D)

2. Power connector

3. Safety wire

4. Audio interface cable

5. Template
for VB-H630D/
VB-M620D

6. Dome case lock screw wrench
(VB-H630VE/VB-M620VE only)

7. Setup CD-ROM

8. Installation Guide (This document)

9. Warranty card

10. Notice

Only for European Union and EEA (Norway, Iceland and Liechtenstein)

These symbols indicate that this product is not to be disposed of with your household waste, according to the WEEE Directive (2012/19/EU), the Battery Directive (2006/66/EC) and/or national legislation implementing those Directives.

If a chemical symbol is printed beneath the symbol shown above, in accordance with the Battery Directive, this indicates that a heavy metal (Hg = Mercury, Cd = Cadmium, Pb = Lead) is present in this battery or accumulator at a concentration above an applicable threshold specified in the Battery Directive.

This product should be handed over to a designated collection point, e.g., on an authorized one-for-one basis when you buy a new similar product or to an authorized collection site for recycling waste electrical and electronic equipment (EEE) and batteries and accumulators. Improper handling of this type of waste could have a possible impact on the environment and human health due to potentially hazardous substances that are generally associated with EEE. Your cooperation in the correct disposal of this product will contribute to the effective usage of natural resources.

For more information about the recycling of this product, please contact your local city office, waste authority, approved scheme or your household waste disposal service or visit www.canon-europe.com/weee, or www.canon-europe.com/battery.

Notes on Privacy and Publicity Rights Regarding the Use of Video/Audio

When using the camera (for video or audio recording), it is the full responsibility of the user to protect privacy and avoid any violation of publicity rights. For example, obtain consent to install the camera in advance if specific buildings or rooms are to be monitored. Canon shall have no liability whatsoever in this regard.

Legal Notice

In some cases, camera monitoring may be prohibited by law or regulation, the details of which differ by country or region. Before using the camera, check the laws or regulations of the country or region where the camera is used.

User Manuals

• Installation Guide (This document)

This guide provides notes on camera installation and explains the procedures to install the camera onto a ceiling or wall.

• Operation Guide (Included in the Setup CD-ROM)

This document explains the initial camera settings, Admin Tools settings, viewer operations and troubleshooting, etc.

Symbols Indicating Camera Model

Camera specific functions will be listed using the icons below.

VB-H630VE : VB-H630VE **H630D** : VB-H630D

M620VE : VB-M620VE **M620D** : VB-M620D

Accessories

Recessed Mounting Kit SR600-VB

This dedicated accessory is used to install the camera recessed into a wall or ceiling.
Failure to do so may result in the camera falling or other accidents.

• Do not touch the edge of metal parts with bare hands.

• Be careful not to trap your fingers during installation of the camera.

Junction Box Mounting Kit PS600-VB

This dedicated accessory is used to mount the camera to a junction box.

Heater unit HU600-VB

This dedicated accessory is attached to the interior of VB-H630VE/VB-M620VE to maintain operation temperature within the dome and achieve stable operation even in extremely cold environments.

Pendant Mounting Kit PC600-VB

This is a dedicated accessory for large stores with high ceilings used to install the camera at the end of a pipe stretching down from the ceiling.

Important

When this accessory is used, the camera may shake more than the vibrations in the ceiling depending on how the pipe is mounted to the ceiling. If the camera angle is off, use the Camera Angle Setting Tool to re-adjust the angle (See "Operation Guide" > "Camera Angle Setting Tool").

Canon AC Adapter PA-V18

A dedicated AC adapter for this camera.

Symbols Indicating Safety Precautions

This Installation Guide uses the following marks to indicate important information the user should know in order to use the product safely. Be sure to observe these items.

Warning

Inappropriate handling against the instruction accompanied by this sign may result in death or serious injury. Be sure to observe these warnings to ensure safety.

Caution

Inappropriate handling against the instruction accompanied by this sign may result in injury. Be sure to observe these precautions to ensure safety.

Caution

Inappropriate handling against the instruction accompanied by this sign may result in property damage. Be sure to observe these precautions.

Important

This symbol indicates important or restricted items. Be sure to read this section.

Note

Contains reference information for operation or additional explanations.

Precautions for Use

Warning

If you discover defective conditions such as smoke, strange sounds, heat or strange odors, immediately stop using the camera and contact your closest dealer.

Fire or electric shock may result from continued use of the product.

Important

These symbols indicate important or restricted items. Be sure to read this section.

Note

Contains reference information for operation or additional explanations.

Precautions for Installing the Camera Outdoors (VB-H630VE/VB-M620VE)

When installing the VB-H630VE/VB-M620VE outdoors, observe the following precautions to retain waterproof/dustproof capabilities.

• Be sure to install the camera under eaves or other places out of direct sunlight.

• Install the camera in a place unexposed to long periods of direct rainfall.

• When mounting the camera onto a wall or other upright surface, position the wiring hole straight down to prevent rain infiltration.

• If wiring the camera through the wiring hole on the bottom, use silicone sealant or a rubber mat to ensure waterproofing. Also use an insect repellent sponge if necessary.

• If wiring with a composite pipe (NPT 3/4 inch threaded hole) attached to the wiring hole, wrap teflon tape around the tip of the pipe, clear any debris from the wiring hole and firmly tighten the pipe. Apply silicone sealant after attaching the pipe.

• Firmly fix the dome case to the main unit of the camera with the lock screws, taking care not to pinch cables between the main unit and dome case.

Fire or electric shock may result.

Safety Precautions

This section explains precautions that must be observed when using the camera. If they are not observed, injury, death and/or property damage may occur. Read the following information carefully and be sure to observe the precautions.

Installation Precautions

Warning

Do not install in the following places:

- Places in strong direct sunlight, near heat-generating objects, or subject to high temperatures
- Places near fire sources or flammable solvents (alcohol, thinner, fuel, etc.)
- Humid or dusty places
- Places subject to oily smoke or steam
- Places subject to sea air
- Confined or enclosed places

Fire or electric shock may result.

Caution

After turning off the power, wait for at least five seconds before turning the power on again. If the power is turned on again too quickly, the camera may operate poorly.

Notes on Power Supply

Warning

- Only use the dedicated AC Adapter (sold separately) for AC power.
- Do not set any heavy objects on the power cable.
- Do not pull, forcibly bend, scratch, or modify the power cable.
- Do not cover or wrap the AC adapter (sold separately) with cloth or blankets.

Fire or electric shock may result.

Be sure to read the user manual for the dedicated AC adapter (sold separately) before use.

Caution

After turning off the power, wait for at least five seconds before turning the power on again. If the power is turned on again too quickly, the camera may operate poorly.

Main Specifications

Camera

Image Sensor 1/3 type CMOS (primary color filter)

VB-H630VE/**H630D** Approx. 2.1 million pixels

M620VE/**M620D** Approx. 1.3 million pixels

Progressive

3x optical (4x digital) zoom lens (electric drive)

2.8 (W) - 8.4 mm (T)

F1.2 (W) - F2.0 (T)

For 16:9 aspect ratios

Horizontal: 110° (W) - 36.5° (T)

Vertical: 60.1° (W) - 20.5° (T)

For 4:3 aspect ratios

Horizontal: 81.2° (W) - 27.3° (T)

Vertical: 60.1° (W) - 20.5° (T)

Auto/Manual

0.3 lux (F1.2, shutter speed 1/30 sec., when smart shade control is off, 50IRE)

0.02 lux (F1.2, shutter speed 1/2 sec., when smart shade control is off, 50IRE)

0.008 lux (F1.2, shutter speed 1/2 sec., when smart shade control is on, 50IRE)

0.015 lux (F1.2, shutter speed 1/30 sec., when smart shade control is off, 50IRE)

0.005 lux (F1.2, shutter speed 1/2 sec., when smart shade control is on, 50IRE)

One-shot/AE/Manual/Fixed at infinity

Day Mode: 0.3 m (12 in.) - infinity

Night Mode: 1.0 m (3.3 ft.) - infinity

1, 1/2, 1/4, 1/8, 1/16, 1/30, 1/60, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/16000 sec.

Auto (Flicker-free)/Auto (Shutter priority AE)/Manual (Shutter Speed, Aperture, Gain)

Auto/Light Source (Daylight Fluorescent/White Fluorescent/Warm Fluorescent/Mercury Lamp/Sodium Lamp/Halogen Lamp)/Manual (One-shot WB/Gain/B Gain)

Metering Mode Center-Weighted/Average/Spot

9 levels

Auto/Manual/Disable

Auto: 3 levels

Manual: 7 levels

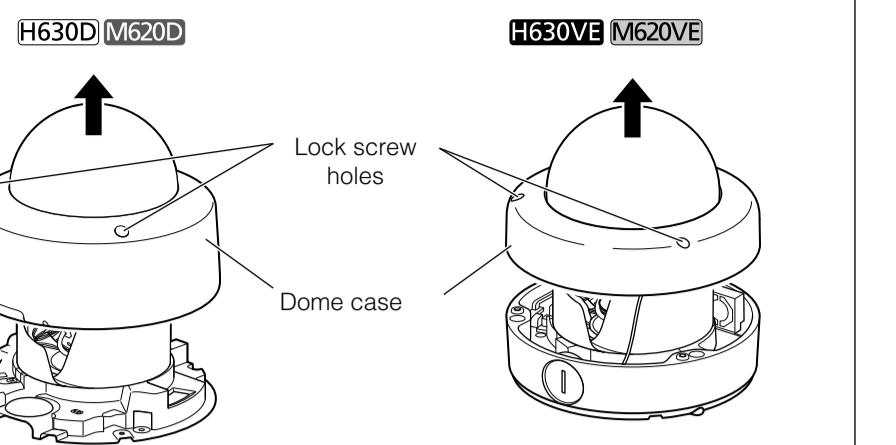
Brighten shaded areas of a video

5 levels

350° (±175°)

150° (±75°)

350° (±1



Installing the Camera

The following describes procedures for mounting the camera to a ceiling. Before installing the camera, set the IP address and other network information on the camera using the "VB Initial Setting Tool" on the Setup CD-ROM. For details on how to operate the "VB Initial Setting Tool", see "Operation Guide".

1 Determine an installation position for the camera and drill holes in the ceiling

Use the included template to determine the positions of the fixing screw holes and wiring hole (40 mm (1.6 in.)) according to the camera orientation. Next, cut out the wiring hole, and drill the fixing screw holes in the ceiling. Use the template with the printed side facing you.

2 Loosen the three lock screws on the dome case and remove the dome case

H630D M620D
Special temper-resistant screws are used for the dome case lock screws. Use the included dome case lock screw wrench.

3 Remove the tape and the inner cover

Remove the 4 pieces of tape that prevent lens rotation during shipping, and push the inner cover in the direction of the arrows to remove it. Then remove the 2 pieces of tape attached to the base of the lens.

Important

Do not move the lens unit by hand. This can damage the lens unit.

4 Open the wiring hole according to the installation method

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Use a box cutter to cut a cross shape into the wiring hole cover in order to guide cables through. Do not remove the wiring hole cover.

H630VE M620VE

Use a coin to unscrew the wiring hole cover from the side through which cables will be guided. Screw the wiring hole cover into the other wiring hole. You can fit a composite pipe (NPT 3/4 inch threaded hole) to the wiring hole.

5 Secure the safety wire

Securely attach the safety wire to an anchor or structure. After securing one end of the safety wire to the ceiling, secure the other end to the camera using the screw that is fastened to the camera.

6 Guide the LAN cable through the wiring hole

When using an external power supply, guide the power interface cable through the wiring hole. Guide the I/O interface cable and the audio interface cable (included) through the wiring hole if necessary.

Important

When using the AC Adapter (sold separately), cut the cable tie and remove the ferrite core. Be sure not to damage the power cable when cutting the cable tie.

7 Fix the camera to the ceiling

Fix the camera at three points to the ceiling using the appropriate screws. Three ceiling fixing screw holes are located on the camera. You must provide screws that correspond to the ceiling fixing screw holes.

8 Wire the cables

Wire the cables referring to "Cable Wiring Method".

Important

When wiring is complete, seal the wiring hole to keep out insects and dust.

9 Attach the inner cover

Attach the inner cover to its original position.

10 Attach the dome case

Firmly fix the dome case at three points to the camera using the dome case screws.

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If the cables cannot be stored above a ceiling made of concrete, etc., break the cutout section of the dome case using diagonal pliers to create a cutout through which to guide the cables.

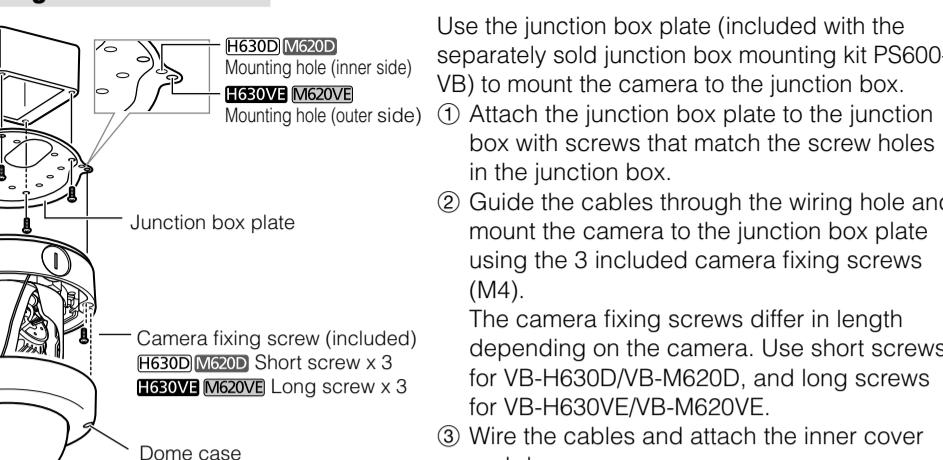
Important H630VE M620VE

When attaching the dome case, be sure not to pinch cables between the camera and dome case. Pinched cables may impair dust and waterproofing capabilities.

11 Set the camera angle

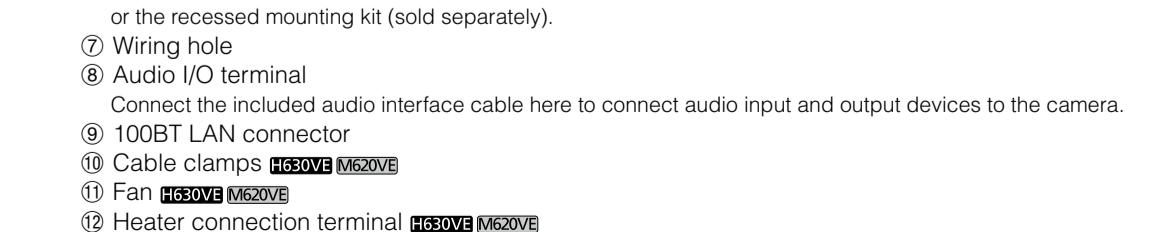
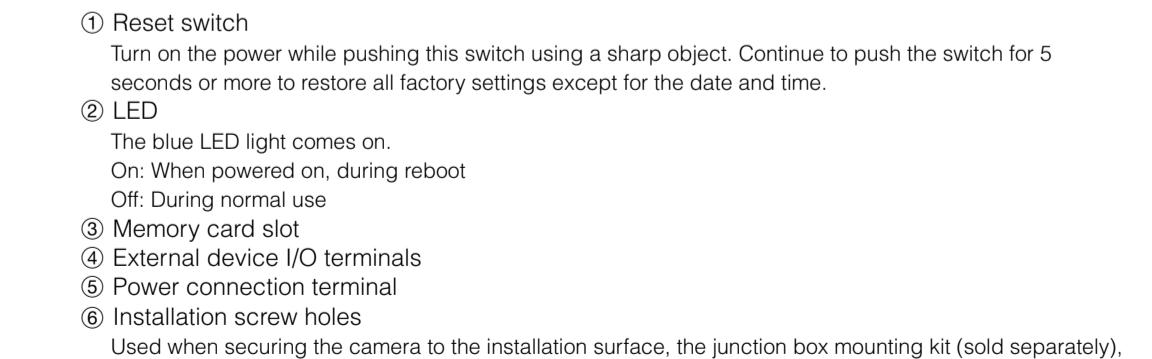
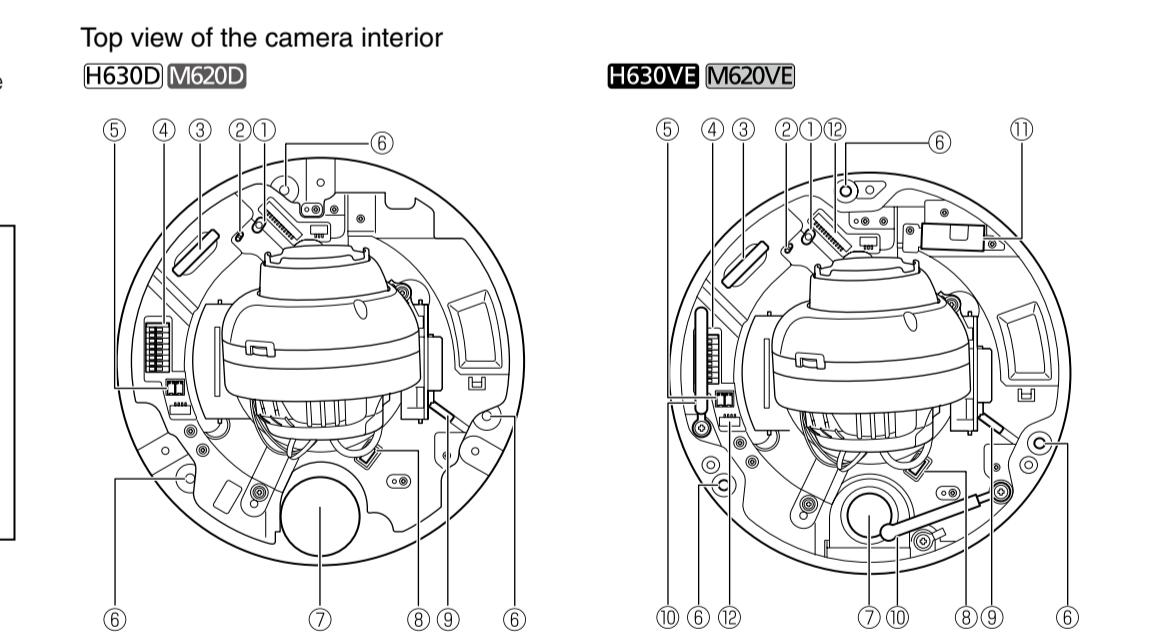
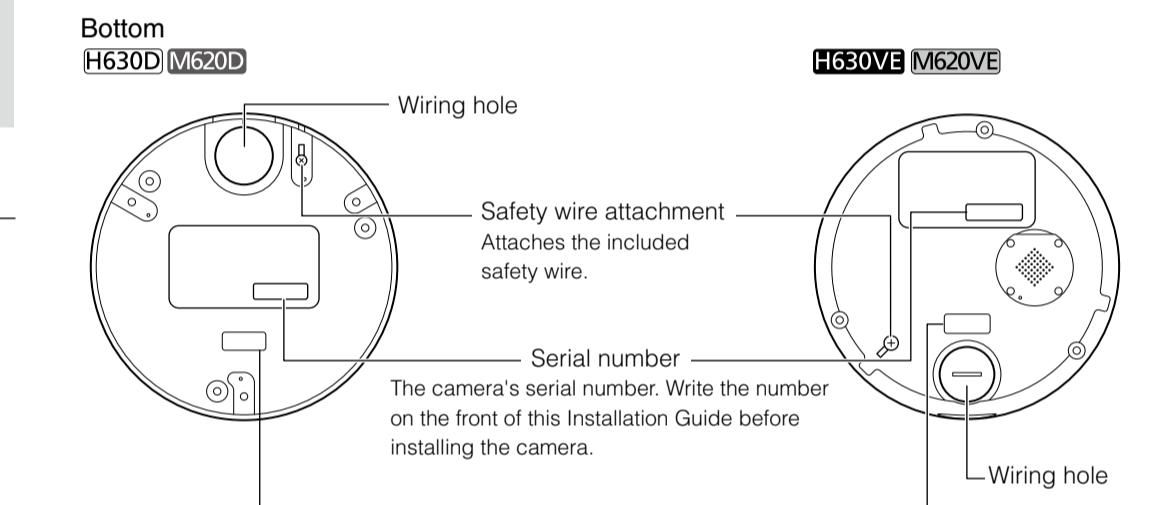
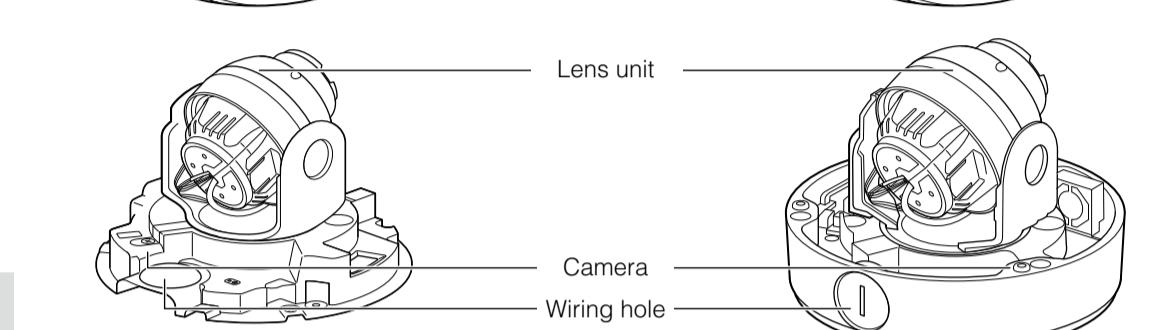
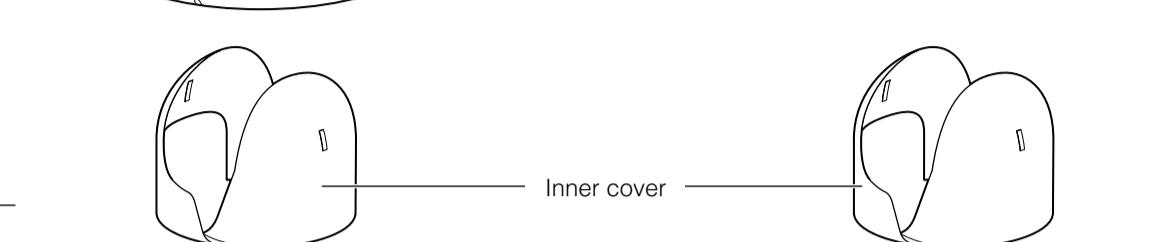
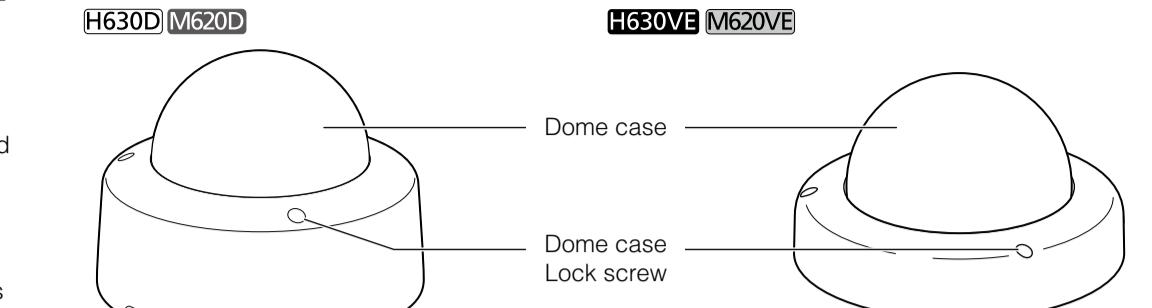
When installation is complete, use the Camera Angle Setting Tool to adjust the pan, tilt, rotation, zoom (and focus) see "Operation Guide" > "Camera Angle Setting Tool".

Attaching a Junction Box



Part Names

Dome Case/Inner Cover/Camera



Connecting the Camera

Power Connection

Power can be supplied to the camera in the three ways described below.

■ PoE (Power over Ethernet)

The camera supports PoE functions. Power can be supplied to the camera by using a LAN cable to connect it to a PoE HUB that conforms to the IEEE 802.3af standard.

■ Important

- Check with your dealer for more information about PoE HUB and Midspan technology. Midspan (a LAN cable power supply device) is a device that, like a PoE HUB, supplies power to the camera via a LAN cable.
- Some PoE HUBs allow current limits for each port, but applying limits may interfere with performance. If using this type of PoE HUB, do not limit the operating current.
- Some PoE HUBs have total consumption current limits for ports, which can interfere with performance when multiple ports are in use. For more information, check the instruction guide for your PoE HUB.
- When the camera is connected to a switching HUB, changing the connection while the camera is operating may cause the HUB learning function to interfere with communication. Do not change the connection when the camera is operating.
- The camera can also be connected to an AC adapter (sold separately) while receiving power from a PoE HUB. In such cases, the PoE power supply is given priority, and the camera does not use the power supply from the AC adapter (sold separately). When the PoE power supply is disconnected, power is supplied automatically from the AC adapter (sold separately).

■ External Device Output Terminals (OUT1, OUT2)

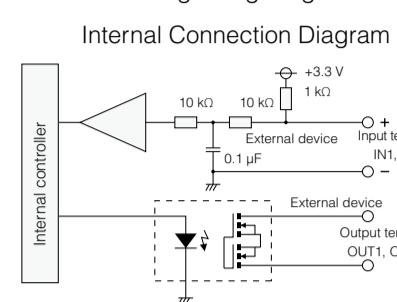
External device output terminals consist of two sets (OUT1, OUT2) of two terminals. The sets have no polarity. Controls from the viewer can be used to open and close the circuit between the terminals. Using optical couplers, the output terminals are isolated from the camera's internal circuit.

The load connected to the output terminals should be within the following rating range.

Rating between output terminals:
Maximum voltage 50 V DC
Continuous load current at or below 100 mA
On resistance: Max. 300

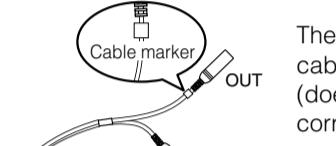
■ Note

Adaptive wiring for external device cables
Solid conductor AWG: No. 28 - 22
Conductor size: $\phi 0.32$ - $\phi 0.65$ mm ($\phi 0.013$ - $\phi 0.026$ in.)
Cable strip should be approx. 8 - 9 mm (0.31 - 0.35 in.)



Audio Input/Output Terminals

Each audio input/output terminal has one input system and one output system. Connecting the camera to an audio input/output device such as a microphone or a speaker with an amplifier allows you to send/receive audio through the viewer. Use the included audio interface cable to connect audio input/output devices to the camera. Use the $\phi 3.5$ mm ($\phi 0.14$ in.) monaural mini-jack connector to connect an audio output device with the audio interface cable.



The long end (has cable marker) from the bifurcation point in the cable corresponds to the audio output terminal. The short end (does not have cable marker) from the bifurcation point in the cable corresponds to the audio input terminal.

■ External Power Supply

12 V DC or 24 V AC input can be used.

Connect the included power connector as shown below.

For 12 V DC and 24 V AC input, use a power supply insulated from 100 V AC.

12 V DC can be connected in a non-polar configuration.

■ Important

- The power supply should be within the following voltage range.
• 24 V AC: Voltage fluctuation within $\pm 10\%$ of 24 V AC (50 Hz or 60 Hz ± 0.5 Hz or less)
Current supply capacity of at least 1.0 A per camera
- 12 V DC: Voltage fluctuation within $\pm 10\%$ of 12 V DC
Current supply capacity of at least 1.5 A per camera
- When using a 12 V DC battery power supply, be sure to connect resistors of at least 0.5 - 1.0 Ω /20 W in series to the power line.
- For an external power supply, use a double-insulated device.

Recommended Power Cables [Reference]

Cable (AWG)	24	22	20	18	16
Conductor diameter mm (in.)	$\phi 0.52$ ($\phi 0.020$)	$\phi 0.65$ ($\phi 0.026$)	$\phi 0.82$ ($\phi 0.032$)	$\phi 1.03$ ($\phi 0.041$)	$\phi 1.30$ ($\phi 0.051$)
12 V DC maximum cable length m (ft.)	5 (16.4)	9 (29.5)	14 (45.9)	23 (75.5)	32 (105.0)
24 V AC maximum cable length m (ft.)	11 (36.1)	18 (59.1)	29 (95.1)	46 (150.9)	64 (210.0)

Use UL cable (UL-1015 or equivalent) for 12 V DC or 24 V AC wiring.

■ AC Adapter

Use the dedicated AC Adapter (sold separately).

■ Note

- The camera does not have a power switch. Connecting and disconnecting the LAN cable (PoE power supply), AC adapter, or external power supply plug turns the power ON and OFF, respectively.
- When the camera needs to be rebooted, perform the reboot operation from the camera setting page (see "Operation Guide" > "Setting Page" > "Maintenance").
- When using the heater unit HU600-VB (sold separately), use 24 V AC for the VB-H630VE/VB-M620VE power supply. PoE, 12 V DC and the AC adapter cannot be used.

External Device I/O Terminals

External device I/O terminals consist of two input and output systems each. Viewer can be used to check external device input status and control output to an external device (see "Operation Guide" > "Selecting the External Device Output" and "Displaying Event Status").

■ External Device Input Terminals (IN1, IN2)

External device input terminals consist of two sets (IN1, IN2) of two terminals, with the negative terminals connected to the camera interior GND. Connecting cables to the positive and negative terminals and opening or closing the circuit notifies the Viewer.

■ Important

- When connecting sensors and switches, connect terminals that are electrically isolated from the respective power and GND.
- Do not push the external device I/O terminal button with too much force. Doing so may cause the button to remain pushed-in.

* Illustrations without icons are examples of VB-H630D/VB-M620D.